

duction covers every phase of the subject, such as history of New England Orthopterology, collections of New England Orthoptera, classification, anatomy, habits, geographical distribution, methods of collecting and preserving, etc. The sequence of the families is changed from that of Mr. Scudder's catalogue of 1900, and more nearly conforms to that of Westwood and Kirby, except that the long-horned grasshoppers or Tettigoniidae precede the crickets. A further change has been made in placing the burrowing crickets and pygmy locusts last in their respective families.

The total number of Orthoptera and Dermaptera recorded from New England is 132, of which probably 104 are native and 28 introduced. Undoubtedly several other species known to occur in the State of New York will in time be found in New England.

In the account of the broad-winged katydid, *Pterophylla camellifolia*, there is a quotation from Dr. Harris stating that the eggs of that species are laid in two contiguous rows along the surface of a twig, the bark of which is previously shaved off or made rough with her piercer. Dr. Harris in his "Insects Injurious to Vegetation" states that he is "indebted to Miss Morris for specimens of these eggs." Evidently Miss Morris sent the Doctor the eggs of *Microcentrum* and not of *Pterophylla*, for we have several times seen the broad-winged katydid laying its eggs in slits in pine bark and in that of the common locust. Others have had similar experience. Dr. Packard, Wm. Saunders and Prof. Kellogg all make the same or nearly the same statement regarding the eggs of the broad-winged katydid, and all no doubt copied from Dr. Harris.

On the six colored plates some of the more strikingly marked species are shown, also the several kinds of tree-crickets, while most of the other plates are devoted to finely executed outline figures of structural characters. There is an accented list of scientific names, also a glossary.

WM. T. DAVIS.

PROCEEDINGS OF THE NEW YORK ENTOMOLOGICAL SOCIETY.

MEETING OF MARCH 16.

A regular meeting of the New York Entomological Society was held at 8 P. M. on March 16, 1920, in the American Museum of Natural History, Vice-President John D. Sherman, Jr., in the chair, with nineteen (19) members and five visitors present.

The Treasurer read a letter from Farmer's Loan & Trust Co., acknowledging addition of \$100 to the Permanent Fund.

Mr. E. A. Smith, 2 Arden St., New York City, was elected an active member.

Several items in current numbers of "Science" were read. Mr. John

J. Davis, present as a visitor, spoke of the manifesto adopted at St. Louis on December 30, 1919, by the Entomological Society of America, and on January 2, 1920, by the American Association of Economic Entomologists, and it was discussed by Dr. Lutz, Messrs. Davis, Lutz and Sherman.

Mr. Comstock, under the title "Notes on African Lycænidae," spoke of the development and distribution of this family of butterflies in the Ethiopian region, illustrating his remarks by specimens of about one sixth of the known species, and by the works of Aurivillius (*Rhopalocera æthiopica* < K. Sv. Vet. Ak. Hand. 1898-1899) and Bethune Baker (Rev. African Lycænesthes < Trans. Ent. Soc. London, 1910). A large part of the specimens shown were collected by Miss McKenzie, a missionary in the Kameruns. Mr. Comstock, after exhibiting maps of Africa, arranged to show its physical characteristics and faunal sub-regions, pointed out that the development of the Lycænidae was remarkable, constituting one third of all the butterflies; and the distribution of one of the subfamilies Lipteninæ almost confined to the Ethiopian region, West Africa being especially their home; while the Lycæninae were found in all the sub-regions of Africa. The work of all authors since Linnæus was reviewed, Hewitson, Trimen and Bethune-Baker having described the largest number of species.

The following tables of distribution were given:

LIPTENINÆ.

	Genera.	Species.
West Africa	18	166
South Africa	6	13
East Africa	4	19
Mascarene	none	none

LYCÆNINÆ.

	Genera.	Species.
West Africa	19	212
South Africa	19	146
East Africa	15	134
Mascarene	8	32

Dr. Avenoff, present as a visitor, spoke of the isolation of the African Lycænidae and of the uncertain boundary between the Palæarctic and Ethiopian regions. He exhibited maps showing a transition region appeared to intervene between them, which might be traced through Arabia even to British India.

Dr. Bequaert said that Dr. Avenoff's idea of a strict limit for the bulk of the species and an extra limit for straying insects was interesting. He gave the botanical idea of the distribution of acacia as establishing the northern limit of the Ethiopian region, and pointed out that it was supported by the distribution of honey birds and snails.

The occurrence of certain plants and insects in the highlands of the east coast was due to elevation.

Mr. Wm. T. Davis exhibited a number of specimens of the cicada *Okana-godes gracilis* recently described in the JOURNAL of the New York Entomological Society from Utah and Arizona. Recently he had received two additional males from Bagdad, San Bernardino Co., California, August 6, 1919 (Rehn and Hebard). Mr. Morgan Hebard, who collected the specimens, reported that they were found on low plants, mid an arid environment. He was attracted by the song, which he first thought was produced by an Orthopterous insect. The cicadas ceased singing when he was still some distance from them, which made their final detection rather difficult.

MEETING OF APRIL 6.

A regular meeting of the New York Entomological Society was held at 8 P. M. on April 6, 1920, in the American Museum of Natural History, President L. B. Woodruff in the chair, with seventeen (17) members present.

Dr. Frank H. Chittenden, Washington, D. C., was elected an active member.

Dr. Walther Horn's request for exchange was referred to the Librarian.

Mr. Davis read letters from E. B. Williamson in Venezuela, Dr. W. T. M. Forbes in Panama and R. P. Dow in California.

Dr. Bequaert made some "Remarks on Dolichopodidæ," in which he pointed out first the characters of these small flies in venation, second basal cell always united with discal cell, and the bend or kink in fourth vein; also their frequently being greenish metallic in color; and secondly the remarkable variety in their male characters, as illustrated in Herman Loew's monograph of 1864 (S. M. C., No. 171). He showed his own collection and that of Mr. Burns, also a small European collection, pointing out the absence of striking faunal differences, and the opportunity for further study. Mr. Burns' collection containing seven species new to the New Jersey List and one species new to science. Passing to the habits, he said the adults were not found on flowers or at light but by sweeping low meadows, on rocks in wet places, on moss about springs and sometimes on the bark of trees. Of the larvæ there was much to learn; Marchand had bred *Argyra* from larvæ found in mud among Tabanids; all the larvæ were carnivorous and cannibals, adding to the difficulty of breeding them; some are known to attack Scolytid larvæ. A paper on Diptera Danica IV by Lundbeck in 1912 contains useful data.

Dr. Sturtevant added some details indicating that the prey of the adults is not always enclosed by the proboscis.

Mr. Schaeffer, under the title "Donaciæ of New York State," gave a remarkable exhibition of minute information on this puzzling group. He pointed out that in two especially plastic species, *cincticornis* and *subtilis*, the characters he had found constant in a very large material indicated more species than were recognized in the last published synopsis. Some of these

had been described by early authors and erroneously sunk in synonymy, such as *episcopalis* Lacordaire and *californica* and *dives* LeConte; others would be described by him in a forthcoming revision of the genus.

The New Jersey List, according to his studies, would require revision by changing *proxima* to *episcopalis* Lec., *distincta* to *torosa* Lec., striking out *hypoleuca* and *femoralis* and *kirbyi* as synonyms and adding six species described by Blatchley and himself.

In discussing the species of New York State, 24 in number, Mr. Schaeffer was unable to finish on account of the late hour, but pointed out the possibility of specimens heretofore called *hypoleuca* being dimorphic forms of *palmata* and the curious fact that the European subgenus *Plateumaris* is apparently more separable there than here, while our species *harrisi* apparently belongs to a subgenus not represented in Europe, characterized by third antennal joint longer than fourth.

In general Mr. Schaeffer favored a recognition of more species and elevating varieties like *proxima* to specific rank.

MEETING OF APRIL 20.

A regular meeting of the New York Entomological Society was held in the American Museum of Natural History at 8 P. M. on April 20, 1920, Vice-President John D. Sherman, Jr., in the chair, with 11 members present.

The Outing Committee announced an excursion to Greenwood Lake on Sunday, May 2d, in conjunction with the Brooklyn Entomological Society.

Mr. Davis read letters from John J. de Vyver and H. H. Ruckes.

Mr. Davis spoke on the Cicadas of the genus *Platypedia* and its allies, placing the older names with certainty and discussing the value of the venation and cells in generic classification. His remarks, which were copiously illustrated by series of specimens, will be printed in full.

Mr. Schaeffer continued his discussion of the *Donacia* of New York State, giving the following list of the species he had recognized, with the diagnostic characters of each as printed in our December JOURNAL:

1. *D. hirticollis* Kirby.
2. *D. cincticornis* Newm.
3. *D. proxima* Kirby.
4. *D. proxima episcopalis* Lec.
5. *D. piscatrix* Lec.
6. *D. palmata* Oliv.
7. *D. rufescens* Lec.
8. *D. edentata* Schffr.
9. *D. parvidens* Schffr.
10. *D. curticollis* Knab.
11. *D. rugosa* Lec.
12. *D. subtilis* Kunze.
13. *D. liebecki* Schffr.

14. *D. megacornis* Blatch.
15. *D. aqualis* Sny.
16. *D. torosa* Lec.
17. *D. tuberculata* Lec.
18. *D. harrisi* Lec.
19. *D. serricauda* Schffr.
20. *D. pusilla dives* Lec.
21. *D. emarginata* Kirby.
22. *D. metallica* Ahr.
23. *D. flavipes* Kirby.
24. *D. rufa* Say.

He also discussed the relation of our species to those of the Palearctic region.

Mr. Mutchler spoke of the single species occurring in Cuba and Dr. Bequaert of the African species.

Mr. Leng exhibited for Mr. Davis *Cicindela pilatei*, taken at Dayton, Texas, June 22, 1917, by Dr. Bequaert; also a copy of Cowan's "Curious Facts in the History of Insects."

Mr. Davis spoke of R. Heber Howe, Jr., "Manual of the Odonata of New England," being a Memoir of the Thoreau Museum of Natural History, Concord, Mass., March, 1917, to March, 1920, in which 156 species are named as compared with 124 known to occur around New York.

Mr. Davis also showed a photograph of Mr. Shoemaker's painting of Lepidoptera with a short account of the years spent in producing it. The painting will be exhibited in the American Museum of Natural History.

Mr. Burns exhibited Insects from the Palisades and Dr. Bequaert commented on certain interesting features thereof, especially the date of mating for a species of *Lasius, niger americanus* of which Mr. Davis had taken a queen on Staten Island April 19.

MEETING OF MAY 4.

A regular meeting of the New York Entomological Society was held at 8 P. M. on May 4, 1920, in the American Museum of Natural History, President L. B. Woodruff in the chair, with 17 members present.

Mr. Nicolay reported for the Outing Committee.

Mr. Leng invited the members to join the Staten Island Bird Club walk May 8th.

Mr. Sherman invited the members to his house, 132 Primrose Ave., Mt. Vernon, on May 15.

Mr. Olsen, under the title "Another European Leafhopper in North America," read a paper illustrated by drawings and specimens, disclosing the European origin of *Eutettix osbornii* Ball. This paper will be printed elsewhere. It was discussed by Dr. Bequaert and Messrs. Barber and Dickinson.

Mr. Notman exhibited "Coleoptera collected at Windsor, N. Y., with remarks on Distribution," in which he reviewed the geological history of this

continent and the life zones of this State, as indicated by vegetation; giving some interesting comparisons from his own collections at widely separated points for genera like *Brachinus* and *Bembidium*. The locality at Windsor, N. Y., had proved especially interesting from the mixture of northern and southern forms and the number of new species, 12 out of 423, requiring description.

Mr. Notman's remarks were discussed by Messrs. Angell, Woodruff and Davis.

Mr. Angell recorded finding a *Cicindela sexguttata* at Rattlesnake Creek, the Bronx, New York City, April 25; remarkable for its small size and unusual color.

Mr. Woodruff reported his visit to Washington and conveyed the good wishes of Messrs, Schwarz, Caudell, Aldrich and Barber to our members.

A CORRECTION.—Page 20, *Agrilus obscuro-guttatus* Gory should read *Agrilus obsoletoguttatus* Gory. H. Notman.